

## **Salted foods may increase cancer risk: Japanese study**

Increased intake of salt may boost the risk of heart disease, while increased consumption of salted foods may increase the risk of cancer, says a new study from Japan.

A study with almost 80,000 men and women showed that salted foods like salted fish roe were associated with a 15 per cent increase in total cancer, while high sodium intake was associated with a 20 per cent increase in cardiovascular disease (CVD) risk, according to findings published in the American Journal of Clinical Nutrition.

“To our knowledge, this is the first prospective cohort study to simultaneously examine associations between sodium and salted foods and the risk of cancer and CVD,” wrote the researchers, led by Manami Inoue from the National Cancer Center in Tokyo.

“Our findings support the notion that sodium and salted foods have differential influences on the development of cancer and CVD,” they added.

Salt – some but not too much

Salt is of course a vital nutrient and is necessary for the body to function, but the average daily salt consumption in the western world, between 10 and 12g, vastly exceeds recommendations from WHO/FAO of 5 grams per day to control blood pressure levels and reduce hypertension prevalence and related health risks in populations.

In countries like the UK, Ireland, the USA, and other Western countries, over 80 per cent of salt intake comes from processed food, and people therefore do not realize they are consuming it.

### **Study details**

Inoue and co-workers examined the influence of salt and salt-preserved foods on the risk of CVD or cancer in 77,500 Japanese men and women aged between 45 and 74. Dietary patterns were estimated using a 138-item food frequency questionnaire.

During the course of their follow-up, 2,066 cases of CVD and 4,476 cases of cancer were diagnosed. The most common forms of cancer documented were gastric, colorectal, and lung cancer.

Statistical analysis showed that people with the highest intakes of sodium – 6,844 milligrams, equivalent to about 17 grams of salt – had a 19 per cent higher risk of cardiovascular disease, compared to people with the lowest average intakes – 3,084 milligrams of sodium, equivalent to about 7 grams of salt.

Sodium and salt itself was not associated with cancer risk, but the consumption of salted foods did have an impact on cancer risk, said the researchers.

In addition to the increased risk of all cancers associated with salted fish roe consumption, a link between pickled vegetables and a higher risk of gastric cancer was observed. Moreover, higher consumptions of dried and salted fish and salted fish roe were linked to a higher risk of gastric and colorectal cancer, said the researchers.

“The present results suggest that the associations of cancer with specific foods with high salt concentrations, such as salted fish roe, are not due to the amount of salt per se, but rather to other causes,” added Inoue and co-workers.

One possible explanation could be the presence of carcinogens called N-nitroso compounds these foods, which may be formed from nitrate or nitrite preservatives.

“An additional, inseparable explanation is the destruction of the gastric mucosal barrier by a high intragastric salt concentration, which leads to inflammation, diffuse erosion, and degeneration,” they added.

***Source: Stephen Daniells, American Journal of Clinical Nutrition***